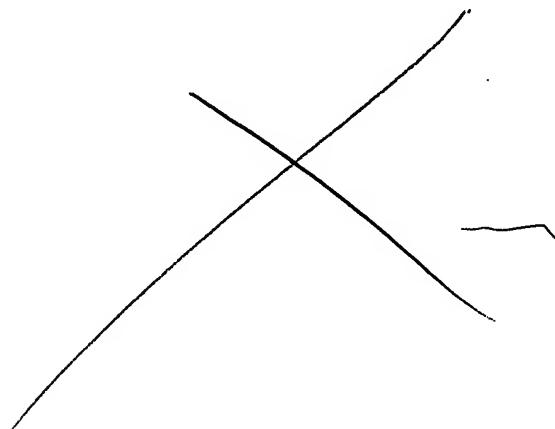


| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|-------|---|---|------------------|---------|------------------|
| L7 | 11 | CYCLOALKYLPHOSPHINE | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/05/30 12:18 |
| L8 | 64081 | POLYISOCYANATE | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/05/30 12:18 |
| L9 | 0 | L7 AND L8 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/05/30 12:19 |
| L10 | 0 | L8 AND (ALKYCYCLOALKYPHOSPHINE OR DIALKYL CYCLOALKYLPHOSPHINE OR TRICYCLOALKYLPHOSPHINE) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2005/05/30 12:21 |



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NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
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NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
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NEWS 19 MAY 23 GBFULL enhanced with patent drawing images
NEWS 20 MAY 23 REGISTRY has been enhanced with source information from CHEMCATS
NEWS 21 MAY 26 STN User Update to be held June 6 and June 7 at the SLA 2005 Annual Conference

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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STRUCTURE FILE UPDATES: 29 MAY 2005 HIGHEST RN 851364-46-0
DICTIONARY FILE UPDATES: 29 MAY 2005 HIGHEST RN 851364-46-0

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*****
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* available and contains the CA role and document type information. *
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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> S CYCLOALKYLPHOSPHINE
I.1 O CYCLOALKYLPHOSPHINE

=> S (CYCLOALKYLPHOSPHINE OR ALKYLCCYCLOALKYLPHOSPHINE OR TRICYCLOALKYLPHOSPHINE)
 0 CYCLOALKYLPHOSPHINE
 0 ALKYLCCYCLOALKYLPHOSPHINE
 0 TRICYCLOALKYLPHOSPHINE
L2 0 (CYCLOALKYLPHOSPHINE OR ALKYLCCYCLOALKYLPHOSPHINE OR TRICYCLOALK
 YLPHOSPHINE)

FILE 'CAPLUS' ENTERED AT 12:27:44 ON 30 MAY 2005
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FILE COVERS 1907 - 30 May 2005 VOL 142 ISS 23
FILE LAST UPDATED: 29 May 2005 (20050529/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S CYCLOALKYLPHOSPHINE
L3 6 CYCLOALKYLPHOSPHINE

=> S POLYISOCYANATE
L4 18201 POLYISOCYANATE

=> S L3 AND L4
L5 0 L3 AND L4

=> D L3 1-6 ABS IBIB

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
AB Aliphatic polyisocyanates comprising uretdione groups and having low content of byproducts (uretonimines), useful as low-viscosity internally blocked crosslinking agents for coatings, were manufactured by dimerization of aliphatic isocyanates in the presence of phosphines bearing ≥ 1 cycloalkyl group on the P atom. For example, in dimerization of hexamethylene diisocyanate at 40-100°, the uretdione selectivity of butyldicyclopentylphosphine catalyst at a given yield was higher than with Bu₃P as catalyst.

ACCESSION NUMBER: 2004:427624 CAPLUS
DOCUMENT NUMBER: 140:424084
TITLE: Manufacture of polyisocyanates containing uretdione groups using cycloalkylphosphines as dimerization catalysts
INVENTOR(S): Richter, Frank; Halpaap, Reinhard; Laas, Hans-Josef; Hecking, Andreas
PATENT ASSIGNEE(S): Bayer Materialsciene Ag, Germany
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| EP 1422223 | A1 | 20040526 | EP 2003-26029 | 20031112 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |

| | | | | |
|------------------------|-------------------|--|------------------|------------|
| DE 10254878 | A1 | 20040603 | DE 2002-10254878 | 20021125 |
| US 2004106789 | A1 | 20040603 | US 2003-719175 | 20031121 |
| BR 2003005203 | A | 20040831 | BR 2003-5203 | 20031121 |
| JP 2004175803 | A2 | 20040624 | JP 2003-393543 | 20031125 |
| PRIORITY APPLN. INFO.: | | | DE 2002-10254878 | A 20021125 |
| OTHER SOURCE(S): | MARPAT 140:424084 | | | |
| REFERENCE COUNT: | 5 | THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | |

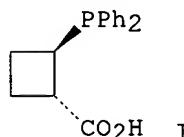
L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
 AB Cycloalkylphosphines were prepared by hydrogenation of arylphosphines in the presence of Nb or Ta aryloxides. Thus, a mixture of Nb(OC₆H₃Ph₂-2,6)2(CH₂C₆H₄Me-4)3, bis(diphenylphosphino)methane, and cyclohexane was kept under 1200 psi H at 100° for 4 days to give 96% bis(dicyclohexylphosphino)methane. A process for hydrogenation of arene-containing polymers using niobium or tantalum hydride hydrocarbyloxides is also claimed.

ACCESSION NUMBER: 1994:298978 CAPLUS
 DOCUMENT NUMBER: 120:298978
 TITLE: Process for the hydrogenation of aryl phosphines
 INVENTOR(S): Rothwell, Ian Paul; Yu, S. Joyce
 PATENT ASSIGNEE(S): Research Corp. Technologies, Inc., USA
 SOURCE: PCT Int. Appl., 33 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| WO 9321192 | A1 | 19931028 | WO 1993-US3453 | 19930413 |
| W: CA, JP, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE US 5530162 | | | | |
| | A | 19960625 | US 1993-90085 | 19930721 |
| PRIORITY APPLN. INFO.: | | | US 1992-867948 | A2 19920413 |
| | | | WO 1993-US3453 | W 19930413 |

OTHER SOURCE(S): CASREACT 120:298978; MARPAT 120:298978

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
 GI



AB A novel type of chiral cycloalkylphosphines bearing a carboxy group at the β-position, e.g., I, were developed, and used for palladium catalyzed asym. allylic alkylation of allylic substrates such as 2-cyclohexenyl acetate and 1,3-disubstituted propenyl acetates. Reaction of the propenyl acetates with soft carbon nucleophiles such as tri-Et sodiophosphonoacetate and sodiummalonic acid esters in the presence of a palladium catalyst prepared in situ from Pd(OAc)₂ and chiral (2-diphenylphosphino)cycloalkanecarboxylic acids gave high yields of alkylation products [PhCH:CHCH(X)Ph: > 77 % ee for X = CH(CO₂Et)P(O)(OEt)₂ > 72 % ee for X = CH(CO₂Me)₂]. The alkylation products were converted into optically active α-methylene γ-lactone and α-methylene macrolide derivs.

ACCESSION NUMBER: 1991:632357 CAPLUS
DOCUMENT NUMBER: 115:232357
TITLE: Synthesis of a novel type of chiral phosphinocarboxylic acids. Phosphine-palladium complex catalyzed asymmetric allylic alkylation
AUTHOR(S): Okada, Yoshiharu; Minami, Toru; Umezawa, Yasuo; Nishikawa, Shinji; Mori, Ryoji; Nakayama, Yutaka
CORPORATE SOURCE: Dep. Appl. Chem., Kyushu Inst. Technol., Kitakyushu, 804, Japan
SOURCE: Tetrahedron: Asymmetry (1991), 2(7), 667-82
CODEN: TASYE3; ISSN: 0957-4166
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 115:232357

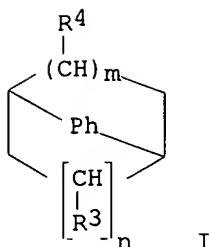
L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
AB The title compds. were prepared by hydrogenation of the corresponding arylphosphine oxides using a noble metal catalyst in a solvent at 10-100° and 0.1-15 MPa H₂. Thus, Ph₃PO in EtOH/HOAc was hydrogenated over Rh₂O₃/PtO₂ at 30° and 1.0 MPa for 5 h to give 75.5% tricyclohexylphosphine oxide.

ACCESSION NUMBER: 1991:229153 CAPLUS
DOCUMENT NUMBER: 114:229153
TITLE: Preparation of cycloalkylphosphine oxides by hydrogenation of arylphosphine oxides
INVENTOR(S): Krause, Hanswalter; Doeblner, Christian
PATENT ASSIGNEE(S): Akademie der Wissenschaften der DDR, Ger. Dem. Rep.
SOURCE: Ger. (East), 8 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|----------|
| DD 283633 | A5 | 19901017 | DD 1988-320978 | 19881021 |
| PRIORITY APPLN. INFO.: | | | DD 1988-320978 | 19881021 |
| OTHER SOURCE(S): | CASREACT 114:229153; MARPAT 114:229153 | | | |

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
AB Unavailable
ACCESSION NUMBER: 1988:6174 CAPLUS
DOCUMENT NUMBER: 108:6174
TITLE: The reactions of bulky cyclopropyl and cyclobutyl phosphines with platinum, palladium, and iridium
AUTHOR(S): Simms, Barbara Lynn
CORPORATE SOURCE: Northwestern Univ., Evanston, IL, USA
SOURCE: (1987) 153 pp. Avail.: Univ. Microfilms Int., Order No. DA8710387
From: Diss. Abstr. Int. B 1987, 48(1), 132
DOCUMENT TYPE: Dissertation
LANGUAGE: English

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
GI



AB R1R2PH (R1, R2 = C2-18 alkyl, cycloalkyl, aralkyl; R2 = H) and I (m, n = 1-3, m + n ≤ 5, R3, R4 = C1-6 alkyl C2-18 cycloalkyl, aralkyl) were prepared by addition of PH₃ to alkenes or cycloalkenes by continuous introduction of PH₃ at 0-35°, 80-300 bar and reaction at 90-190° in the presence of a radical catalyst. Thus, PH₃ at 25°, 150 bar was added to a 50:50:1 mixture of cyclohexene-toluene-azobisisobutyronitrile at 120° to give cyclohexylphosphine. Similarly prepared were 1-octylphosphine and 9H-9-phosphabicyclononanes.

ACCESSION NUMBER: 1978:580154 CAPLUS
 DOCUMENT NUMBER: 89:180154
 TITLE: Continuous manufacture of organic phosphines
 INVENTOR(S): Elsner, Georg; Heymer, Gero; Stephan, Hans-Werner
 PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 15 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| DE 2703802 | A1 | 19780803 | DE 1977-2703802 | 19770129 |
| DE 2703802 | B2 | 19781116 | | |
| DE 2703802 | C3 | 19790712 | | |
| GB 1561874 | A | 19800305 | GB 1978-1243 | 19780112 |
| CA 1071653 | A1 | 19800212 | CA 1978-205070 | 19780117 |
| US 4163760 | A | 19790807 | US 1978-872250 | 19780125 |
| NL 7800955 | A | 19780801 | NL 1978-955 | 19780126 |
| NL 177407 | B | 19850416 | | |
| NL 177407 | C | 19850916 | | |
| CH 632518 | A | 19821015 | CH 1978-879 | 19780126 |
| BE 863423 | A1 | 19780727 | BE 1978-184717 | 19780127 |
| DK 7800410 | A | 19780730 | DK 1978-410 | 19780127 |
| DK 145743 | B | 19830214 | | |
| DK 145743 | C | 19830801 | | |
| FR 2378790 | A1 | 19780825 | FR 1978-2415 | 19780127 |
| FR 2378790 | B1 | 19840309 | | |
| DD 134768 | C | 19790321 | DD 1978-203449 | 19780127 |
| JP 53095920 | A2 | 19780822 | JP 1978-9216 | 19780130 |
| JP 60035353 | B4 | 19850814 | | |
| PRIORITY APPLN. INFO.: | | | DE 1977-2703802 | A 19770129 |

=> S L4 AND CYCLOPENTYLPHOSPHINE
 15 CYCLOPENTYLPHOSPHINE
 L6 0 L4 AND CYCLOPENTYLPHOSPHINE

=> FILE CASREACT
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SINCE FILE TOTAL
 ENTRY SESSION

| | | |
|--|------------------|---------------|
| FULL ESTIMATED COST | 21.82 | 43.44 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -3.65 | -3.65 |

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FILE CONTENT:1840 - 29 May 2005 VOL 142 ISS 22

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*          *
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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> S L4
L7          9 POLYISOCYANATE

=> S L7 AND L3
      3 CYCLOALKYLPHOSPHINE
L8          0 L7 AND L3

=> S L3
L9          3 CYCLOALKYLPHOSPHINE

=> S L4
L10         9 POLYISOCYANATE

=> S POLYISOCYANATE
L11         9 POLYISOCYANATE

=> S L11 AND L9
L12         0 L11 AND L9

=> D L11 1-9 ABS IBIB
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L11 ANSWER 1 OF 9 CASREACT COPYRIGHT 2005 ACS on STN
 AB A method for avoiding manufacturing troubles caused by the reactivity of reactive reaction products or raw material thereof in batch-mode preparation, in particular a simple and perfect method for preventing the formation of urea or urea polymers in a batch-mode preparation of isocyanates, e.g. polyisocyanates by phosgenation of polyamines, is provided. Claimed is a method for prevention of clogging of a sample introduction tube which comprises (1) washing with solvent the inner wall of the sample introduction tube used for adding a reaction product and a reactive raw

material at least after discharging the reaction product from a reaction bath and (2) applying pressure on the liquid surface inside the sample introduction tube to prevent liquid from being retained inside the sample introduction tube used for adding the reaction product and the reactive raw materials. The raw materials are polyamines, in particular compds. having amino groups on a biphenyl skeleton and the reaction products are polyisocyanates, in particular compds. having isocyanato groups on a biphenyl skeleton. Moreover, the reaction is carried out in a batch system. Thus, 4,000 L of a 11 weight% solution of triazinediamine (water content of 15-20 weight%) in chlorobenzene (MCB) was added to a 5 m² reaction bath fitted with a sample introduction tube and a stirrer and azeotropically distilled until the water content in MCB reached ≤100 ppm, and heated to 115° with stirring, followed by blowing HCl(g) into the solution from a port 1 connected to the sample introduction tub to form a slurry of triazinediamine hydrochloride and then introducing MCB from a port 3 to wash the inner wall of the sample introduction tube while simultaneously introducing N from a port 2 to prevent the liquid surface from entering inside the sample introduction tube. After stopping the flow of N, phosgene was introduced at 40-50 m³/h for 8 h into the reaction mixture through the port 1, followed by removing excess phosgene by introducing N, transferring the reaction liquid to a reaction liquid receiving bath through a valve at the bottom of the reaction bath, pouring 50 L MCB at 6 m²/h for 30 s from the port 3 to wash the inner wall of the sample introduction tube, and transferring the washing liquid to the reaction liquid receiving bath which completed one batch of the reaction. After 100 batches of the reaction, the automatic valve for introducing HCl remained about 50% degree of opening and did not show any sign of clogging.

ACCESSION NUMBER: 138:204723 CASREACT
 TITLE: Method for prevention of clogging of sample introduction tube
 INVENTOR(S): Arata, Kimikazu; Kinpei, Koji; Deguchi, Kazuo
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2003055332 | A2 | 20030226 | JP 2001-247646 | 20010817 |
| PRIORITY APPLN. INFO.: | | | JP 2001-247646 | 20010817 |

L11 ANSWER 2 OF 9 CASREACT COPYRIGHT 2005 ACS on STN
 AB Aromatic urethanes, useful for starting materials for polymethylene polyphenyl **polyisocyanate**, are prepared by treating aromatic nitro compds. with OH-containing organic compds. and CO in the presence of platinum group catalysts and promoters comprising Lewis acids and <0.5 mol (per 1 g-ion of anion of the Lewis acids) N-containing hetero aromatic compound bidentates. Thus, 1.2311 g PhNO₂ (I) was autoclaved with 15 mL EtOH in the presence of 2,2'-bipyridyl 0.0390, FeCl₃ 0.4055, and 5% Pd/C 0.1064 g under 80 kg/cm² (gage) CO atmospheric at 160° for 3 h to give Et phenylcarbamate in 83.3% yield and 100.0% conversion of I.

ACCESSION NUMBER: 115:158746 CASREACT
 TITLE: Preparation of aromatic urethanes
 INVENTOR(S): Iwata, Kazuyuki; Kurachi, Kazuhito
 PATENT ASSIGNEE(S): Sumitomo Metal Industries, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 03074358 | A2 | 19910328 | JP 1989-211809 | 19890817 |
| PRIORITY APPLN. INFO.: | | | JP 1989-211809 | 19890817 |

L11 ANSWER 3 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB A method for the preparation of O-silylated aliphatic hydroxy compds. via the reaction of aliphatic hydroxy compds. with chlorotriorganosilane in the presence of phase transfer catalyst is claimed. The O-silylated hydroxy compds. were used as starting materials for the preparation of ester groups-containing isocyanates via reaction with isocyanatocarboxylic acid chlorides. Thus, Et₃N+CH₂PhCl--catalyzed silylation of trimethylolpropane with Me₃SiCl at 54-104° gave 96% 1,1,1-tris(trimethylsiloxy)methylpropane which on treatment with 6-isocyanatohexanoyl chloride gave an ester group-containing polyisocyanate. The reaction was performed in one pot without isolating (Me₃SiOCH₂)₃C₂H₅. 

ACCESSION NUMBER: 115:71892 CASREACT

TITLE: Preparation of O-silylated hydroxy compounds and their application in the preparation of ester group-containing isocyanates

INVENTOR(S): Schmalstieg, Lutz; Pedain, Josef; Nachtkamp, Klaus

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|--------|-----------|-----------------|----------|
| EP 422472 | A2 | 19910417 | EP 1990-118753 | 19900929 |
| EP 422472 | A3 | 19920102 | | |
| EP 422472 | B1 | 19951227 | | |
| R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| DE 3934100 | A1 | 19910418 | DE 1989-3934100 | 19891012 |
| CA 2026031 | AA | 19910413 | CA 1990-2026031 | 19900924 |
| CA 2026031 | C | 19991116 | | |
| AT 132155 | E | 19960115 | AT 1990-118753 | 19900929 |
| ES 2083410 | T3 | 19960416 | ES 1990-118753 | 19900929 |
| JP 03135986 | A2 | 19910610 | JP 1990-269656 | 19901009 |
| US 5142081 | A | 19920825 | US 1990-596173 | 19901010 |
| PRIORITY APPLN. INFO.: | | | DE 1989-3934100 | 19891012 |
| OTHER SOURCE(S): | MARPAT | 115:71892 | | |

L11 ANSWER 4 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB The title polyisocyanates, useful in polyurethane coatings, are prepared by heating (cyclo)aliphatic diisocyanates in ≥15-fold molar excess with 3,7-diamino-2-heptanol (I) or its aqueous solns. at 100-210°. I was prepared by N-acetylation of 3,7-diamino-2-heptanone, hydrogenation over Raney Ni in H₂O at 90°/40-60 bar, and acid hydrolysis. Mixing hexamethylene diisocyanate 1680, I 18.25, and H₂O 2.25 g at 180°, heating at 120° until the refractive index was 1.4588, and removing excess diisocyanate by short-path distillation at 120°/0.1 mbar gave 299 g polyisocyanate (II) containing 24.3% NCO and 10% uretdione groups, with viscosity 980 mPa·s at 23°. An unpigmented coating containing a polyester, hydroxylated acrylic polymer, and II had pot life 3.7 h and,

X

when cured 30 min at 120°, pendulum hardness 210 s and excellent solvent resistance.

ACCESSION NUMBER: 112:58366 CASREACT
TITLE: Preparation of polyisocyanates containing biuret and uretdione groups
INVENTOR(S): Scholl, Hans Joachim; Pedain, Josef; Schoenfelder, Manfred
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|----------|
| DE 3801934 | A1 | 19890803 | DE 1988-3801934 | 19880123 |
| EP 325941 | A2 | 19890802 | EP 1989-100371 | 19890111 |
| EP 325941 | A3 | 19900704 | | |
| R: BE, DE, FR, GB, IT, NL | | | | |
| JP 02003410 | A2 | 19900109 | JP 1989-11019 | 19890121 |
| PRIORITY APPLN. INFO.: | | | DE 1988-3801934 | 19880123 |

L11 ANSWER 5 OF 9 CASREACT COPYRIGHT 2005 ACS on STN
AB A normal-phase high-performance liquid chromatog. method is described for the determination of aliphatic and aromatic **polyisocyanate** monomers or prepolymers after derivatization with 1-(2-methoxyphenyl)piperazine. The separation of 2,4- and 2,6-toluene diisocyanate, hexamethylene diisocyanate, and 4,4'-methylenediphenyl diisocyanate derivs. was performed with 5 and 10 µm cyan-amino bonded silica stationary phase under isocratic conditions and with UV detection. The same elution conditions were used for the resolution of several com. isocyanate prepolymer derivs., in reasonable anal. times. The method was also used for air anal.

ACCESSION NUMBER: 110:165276 CASREACT
TITLE: Separation of the urea piperazine derivatives of **polyisocyanate** monomers and prepolymers by normal phase chromatography
AUTHOR(S): Simon, P.; Moulut, O.
CORPORATE SOURCE: INRS, Vandoeuvre, 54501, Fr.
SOURCE: Journal of Liquid Chromatography (1988), 11(9-10), 2071-89
DOCUMENT TYPE: Journal
LANGUAGE: English

L11 ANSWER 6 OF 9 CASREACT COPYRIGHT 2005 ACS on STN
AB Aromatic ketones containing reactive groups separated from the carbonyl group by a spacer group are prepared for use as photopolymn. initiators which are covalently bonded to polymers. The Friedel-Crafts acylation of 540 g PhOCH₂CH₂OAc by 336 g Me₂CHCOCl gave 740 g 4-(Me₂CHCO)C₆H₄OCH₂CH₂OAc which was brominated (205 g) in AcOH and saponified with 32% NaOH in EtOH to give 145 g 4-(HOCH₂CH₂O)C₆H₄COCMe₂OH (I). A mixture of I, an OH-containing polyacrylate (Desmophen A 365), a urethane acrylate (VPS 1748), hexanediol diacrylate, and pentaerythritol triacrylate was treated with an aliphatic **polyisocyanate**, coated (50 µm) on glass, dried, exposed to UV light to give a dry surface, and cured 1 h at 60° to give a coating with pendulum hardness 188 s.

ACCESSION NUMBER: 110:137076 CASREACT
TITLE: Reactive photoinitiators for polymerization of

INVENTOR(S):

~~X~~
ethylenically unsaturated compounds
Koehler, Manfred; Ohngemach, Joerg; Poetsch, Eike;
Eidenschink, Rudolf; Greber, Gerhard; Dorsch, Dieter;
Gehlhaus, Juergen; Dorfner, Konrad; Hirsch, Hans
Ludwig

PATENT ASSIGNEE(S):

Merck Patent G.m.b.H., Fed. Rep. Ger.

SOURCE:

Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

German

FAMILY ACC. NUM. COUNT: 1

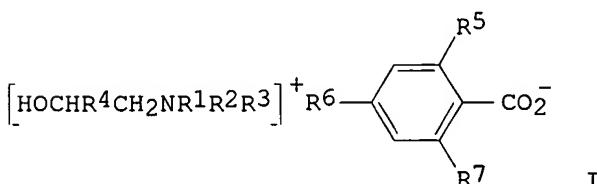
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| EP 281941 | A2 | 19880914 | EP 1988-103267 | 19880303 |
| EP 281941 | A3 | 19900516 | | |
| EP 281941 | B1 | 19931208 | | |
| R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| DE 3738567 | A1 | 19880922 | DE 1987-3738567 | 19871113 |
| AU 8812624 | A1 | 19880915 | AU 1988-12624 | 19880302 |
| AU 608573 | B2 | 19910411 | | |
| AT 98265 | E | 19931215 | AT 1988-103267 | 19880303 |
| ES 2060611 | T3 | 19941201 | ES 1988-103267 | 19880303 |
| DD 280767 | A5 | 19900718 | DD 1988-313566 | 19880310 |
| CA 1337353 | A1 | 19951017 | CA 1988-561039 | 19880310 |
| DK 8801337 | A | 19880913 | DK 1988-1337 | 19880311 |
| DK 173995 | B1 | 20020402 | | |
| FI 8801166 | A | 19880913 | FI 1988-1166 | 19880311 |
| FI 98817 | B | 19970515 | | |
| FI 98817 | C | 19970825 | | |
| BR 8801089 | A | 19881018 | BR 1988-1089 | 19880311 |
| JP 63254105 | A2 | 19881020 | JP 1988-56505 | 19880311 |
| ZA 8801776 | A | 19881026 | ZA 1988-1776 | 19880311 |
| JP 10175908 | A2 | 19980630 | JP 1997-336451 | 19880311 |
| US 5532112 | A | 19960702 | US 1994-252729 | 19940602 |
| US 5744512 | A | 19980428 | US 1996-618701 | 19960320 |
| US 5837746 | A | 19981117 | US 1997-880384 | 19970623 |
| PRIORITY APPLN. INFO.: | | | DE 1987-3707891 | 19870312 |
| | | | DE 1987-3738567 | 19871113 |
| | | | EP 1988-103267 | 19880303 |
| | | | JP 1988-56505 | 19880311 |
| | | | US 1988-167060 | 19880311 |
| | | | US 1991-720141 | 19910624 |
| | | | US 1992-951299 | 19920924 |
| | | | US 1994-252729 | 19940602 |
| | | | US 1996-618701 | 19960320 |
| | | | US 1996-703494 | 19960827 |

OTHER SOURCE(S):

MARPAT 110:137076

L11 ANSWER 7 OF 9 CASREACT COPYRIGHT 2005 ACS on STN
GI



AB Diisocyanates are reacted with diols in the presence of ammonium benzoates I (R₁, R₂, R₃ = C₁-20 hydrocarbyl optionally containing N, O, or S atoms and optionally with 2 of R₁, R₂, and R₃ linked together, R₄ = H or C₁-20 hydrocarbyl optionally containing OH, R₅, R₆, R₇ = H or C₁-20 hydrocarbyl) or Z (CO₂R₁R₂R₃NCH₂CHR₄OH)₂ (R₁, R₂, R₃ = same as in I, R₄ = C₁-20 hydrocarbyl, Z = C₁-20 hydrocarbylene) to give isocyanurate ring-containing polyisocyanates. These polyisocyanates are used with acrylic polyols to prepare rapid-drying nonyellowing polyurethane paints. Thus, 20% I (R₁ = R₂ = R₃ = R₄ = Me, R₅ = R₇ = H, R₆ = CMe₃)-butyl Cellosolve solution was added portionwise to a mixture containing 1400 g hexamethylene diisocyanate and 50 g 2,2,4-trimethyl-1,3-pentanediol at 55°, and the mixture was heated 4.5 h at 60-62° to give a **polyisocyanate** (II) with NCO content 15.0%, which when used with Acrydic A 800 (acrylic polyol, OH value 50), provided a 2-package paint, that exhibited a good balance of film mech. properties and a dust-free drying time of 65 min, compared with 120. min for a similar coating using Burnock DN950 instead of II.

ACCESSION NUMBER: 104:90643 CASREACT

TITLE: Isocyanurate ring-containing **polyisocyanate** and resin composition for urethane paints comprising said **polyisocyanate** and acrylic polyol

INVENTOR(S): Kase, Mitsuo; Okoshi, Noboru; Tsuyuzaki, Kazue

PATENT ASSIGNEE(S): Dainippon Ink Chemical Industry Co., Japan

SOURCE: Eur. Pat. Appl., 44 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| EP 155559 | A1 | 19850925 | EP 1985-102178 | 19850227 |
| R: DE, FR, GB, NL | | | | |
| JP 60181114 | A2 | 19850914 | JP 1984-38356 | 19840229 |
| JP 04014692 | B4 | 19920313 | | |
| JP 60181078 | A2 | 19850914 | JP 1984-38357 | 19840229 |
| JP 05051587 | B4 | 19930803 | | |
| JP 60218357 | A2 | 19851101 | JP 1984-76321 | 19840416 |
| JP 61111371 | A2 | 19860529 | JP 1984-232337 | 19841106 |
| JP 06025327 | B4 | 19940406 | | |
| US 4582888 | A | 19860415 | US 1985-706593 | 19850228 |
| PRIORITY APPLN. INFO.: | | | JP 1984-38356 | 19840229 |
| | | | JP 1984-38357 | 19840229 |
| | | | JP 1984-76321 | 19840416 |
| | | | JP 1984-232337 | 19841106 |

L11 ANSWER 8 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Trimerization catalysts for organic diisocyanates, giving products useful for the manufacture of polyurethanes, are prepared by reaction of equimolar mixts. of

R₁R₂C:C(NR₃R₄)NR₅R₆ (R₁, R₂ = H, lower alkyl, aryl, aralkyl, cycloalkyl; R₃-R₆ = lower alkyl, aralkyl, cycloalkyl, or NR₃R₄, NR₅R₆ = 6- or 7-membered-ring heterocycles) and R₁R₂C:CR₃R₄ [R₁ = H, lower alkyl, aryl, aralkyl, cycloalkyl; R₂ = lower alkyl, aryl, aralkyl, cycloalkyl (or R₁R₂ = C₄-5 alkylene); R₃, R₄ = electron-withdrawing group]. Thus, 0.0025 mol 1,1-bis(morpholino)ethylene was reacted with 0.0025 mol 4-morpholinobenzylidenemalononitrile in AcNMe₂ at 20-35° to give a 22% catalyst solution, 0.5 part (solids) of which was mixed with 1 equiv 50:50 diphenylmethane 2,4'-diisocyanate-diphenylmethane 4,4'-diisocyanate mixture [isocyanate equivalent (I.E.) 125] until an exotherm to 70° receded to give a yellow liquid isocyanurate-modified **polyisocyanate**

with I.E. 160. A mixture containing a similar isocyanurate-modified polyisocyanate (I.E. 147) 56.65, Niax 11-27 (polyether triol) 90, Niax 34-28 (acrylonitrile-styrene copolymer polyol) 30, water 3, Niax A-1 (amine catalyst) 0.2, Bu₂Sn bis(dodecyl mercaptide) 0.0025, silicone surfactant 0.1, and silicone glycol copolymer 0.02 part was stirred vigorously for 5 s and allowed to foam with rise time 84 s and time-to-firm 96 s to give a flexible sample with d. 2.54 lb/ft³, tensile strength 14 psi, tear strength 2.6 lb/in., breaking elongation 140%, and 75% compression set 20.3%.

ACCESSION NUMBER: 104:89735 CASREACT
 TITLE: Catalyst compositions for trimerizing organic isocyanates
 INVENTOR(S): Regelman, Dale F.
 PATENT ASSIGNEE(S): Upjohn Co. , USA
 SOURCE: U.S., 10 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 4536490 | A | 19850820 | US 1984-587429 | 19840308 |
| US 4632989 | A | 19861230 | US 1985-737837 | 19850528 |
| US 4703099 | A | 19871027 | US 1986-909543 | 19860922 |
| US 4719245 | A | 19880112 | US 1986-909546 | 19860922 |
| PRIORITY APPLN. INFO.: | | | US 1984-587429 | 19840308 |
| | | | US 1985-737837 | 19850528 |

L11 ANSWER 9 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Fluoroolefins F₂C:CF(CF₂)_m(CH₂)_nOH (m = 0-10, n = 1-4) are prepared. The olefins are useful in the preparation of copolymer for use in paints and rubber compns. curable at room temperature. Thus, ClCF₂CClFI [354-61-0] was treated with H₂C:CH₂ [74-85-1] in the presence of tert-Bu peroxyisobutyrate to prepare ClCF₂CClFCH₂CH₂I [679-69-6], and this compound was hydrolyzed to prepare ClCF₂CClFCH₂CH₂OH [97229-40-8], which was added to water containing

Zn to prepare F₂C:CFCH₂CH₂OH [97168-13-3]. The same method, using F₂C:CF₂ [116-14-3] in 1 step, was used to prepare F₂C:CFCF₂CF₂CH₂CH₂OH [97168-16-6], which was copolymerd. with F₂C:CH₂ and F₂C:CClF. The copolymer was crosslinked with hexamethylene diisocyanate trimer [28574-90-5] to prepare a transparent, glossy coating having pencil hardness 2H and good resistance to accelerated weathering.

ACCESSION NUMBER: 103:106434 CASREACT
 TITLE: Fluorine-containing olefins
 INVENTOR(S): Ohmori, Akira; Tomihashi, Nobuyuki; Inukai, Hiroshi; Shimizu, Yoshiki
 PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd. , Japan
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| EP 138091 | A1 | 19850424 | EP 1984-111202 | 19840920 |
| EP 138091 | B1 | 19881117 | | |
| R: DE, FR, GB | | | | |
| JP 60064940 | A2 | 19850413 | JP 1983-175122 | 19830921 |

JP 63054696 B4 19881028
US 4564717 A 19860114 US 1984-653006 19840921
PRIORITY APPLN. INFO.: JP 1983-175122 19830921

=> E POLYISOCYANATE

E1 1 POLYISOBUTYLBENZOPHENONE/BI
E2 14 POLYISOBUTYLENE/BI
E3 9 --> POLYISOCYANATE/BI
E4 1 POLYISOCYANATED/BI
E5 21 POLYISOCYANATES/BI
E6 1 POLYISOCYANATOPOLYBENZYL/BI
E7 1 POLYISOCYANIDE/BI
E8 1 POLYISOCYANO/BI
E9 1 POLYISOCYANOPOLYBENZYL/BI
E10 3 POLYISOCYANURATE/BI
E11 5 POLYISOCYANURATES/BI
E12 4 POLYISOLEUCINE/BI

=> E CYCLOALKYLPHOSPHINE

E1 1 CYCLOALKYLPHENYLSILANOLS/BI
E2 1 CYCLOALKYLPHENYLTELLURIUM/BI
E3 3 --> CYCLOALKYLPHOSPHINE/BI
E4 2 CYCLOALKYLPHOSPHINES/BI
E5 1 CYCLOALKYLPHOSPHINIC/BI
E6 2 CYCLOALKYLPHOSPHONATE/BI
E7 6 CYCLOALKYLPHOSPHONATES/BI
E8 3 CYCLOALKYLPHOSPHONIC/BI
E9 1 CYCLOALKYLPHOSPHONIUM/BI
E10 1 CYCLOALKYLPHOSPHORANE/BI
E11 1 CYCLOALKYLPTHALIMIDE/BI
E12 1 CYCLOALKYLPIPERAZINES/BI

=> S LE

L13 44 LE

=> E POLYISOCYANATE

E1 1 POLYISOBUTYLBENZOPHENONE/BI
E2 14 POLYISOBUTYLENE/BI
E3 9 --> POLYISOCYANATE/BI
E4 1 POLYISOCYANATED/BI
E5 21 POLYISOCYANATES/BI
E6 1 POLYISOCYANATOPOLYBENZYL/BI
E7 1 POLYISOCYANIDE/BI
E8 1 POLYISOCYANO/BI
E9 1 POLYISOCYANOPOLYBENZYL/BI
E10 3 POLYISOCYANURATE/BI
E11 5 POLYISOCYANURATES/BI
E12 4 POLYISOLEUCINE/BI

=> S L3

L14 3 CYCLOALKYLPHOSPHINE

=> S L13 AND L14

L15 0 L13 AND L14

=> D HIS

(FILE 'HOME' ENTERED AT 12:23:38 ON 30 MAY 2005)

FILE 'REGISTRY' ENTERED AT 12:23:49 ON 30 MAY 2005

L1 0 S CYCLOALKYLPHOSPHINE
L2 0 S (CYCLOALKYLPHOSPHINE OR ALKYL CYCLOALKYLPHOSPHINE OR TRICYCLO

FILE 'CAPLUS' ENTERED AT 12:27:44 ON 30 MAY 2005
L3 6 S CYCLOALKYLPHOSPHINE
L4 18201 S POLYISOCYANATE
L5 0 S L3 AND L4
L6 0 S L4 AND CYCLOPENTYLPHOSPHINE

FILE 'CASREACT' ENTERED AT 12:30:02 ON 30 MAY 2005
L7 9 S L4
L8 0 S L7 AND L3
L9 3 S L3
L10 9 S L4
L11 9 S POLYISOCYANATE
L12 0 S L11 AND L9
 E POLYISOCYANATE
 E CYCLOALKYLPHOSPHINE
L13 44 S LE
 E POLYISOCYANATE
L14 3 S L3
L15 0 S L13 AND L14